

UNIVERSITI TEKNOLOGI MARA

FACULTY OF INFORMATION TECHNOLOGY AND QUANTITATIVE SCIENCE

**THE DEVELOPMENT AND EVALUATION OF CONFIGURABLE
WEB USAGE ANALYZER**

BY

NASRUL AZLI BIN AHMAD

2004633591

B. Sc (HONS) DATA COMMUNICATION AND NETWORKING

**THE DEVELOPMENT AND EVALUATION OF CONFIGURABLE WEB
USAGE ANALYZER**

BY

NASRUL AZLI BIN AHMAD

2004633591

A final project submitted in partial fulfillment of the requirement for the
B. Sc (HONS) DATA COMMUNICATION AND NETWORKING

A project paper submitted to

FACULTY OF INFORMATION TECHNOLOGY AND QUANTITATIVE SCIENCE

UNIVERSITI TEKNOLOGI MARA

MAY 2006

Approved by the Examining Committee :

.....

Project Supervisor,

EN MOHD FAISAL BIN IBRAHIM

.....

Examiner,

PROF. MADYA DR. SAADIAH BINTI
YAHYA

DECLARATION

I hereby declare that the work in this project paper is on my own except for those quotations and summaries, which have been acknowledged.

.....
NASRUL AZLI BIN AHMAD
2004633591

ABSTRACT

Learning Web users' preferences and adapting the Web information structure to the users' behaviors can improve the effectiveness of the particular websites. In addition, automatic knowledge extraction from the Web server log files, page tags, network packets and cookies can be useful for identifying such reading patterns and infer user profiles in order to design the website suited for different group of users. Therefore we develop a Web Usage Analyzer System in order to extract the useful implicit and previously unknown patterns from the usage of the website. In our study we analyzed an online course using web usage mining techniques by analyzing users' behavior in terms of site usage, involvement of the most active users from their navigational activities and the number of visits throughout the semester of the course. By using this system, lecturer manage to analyze students' behavior in terms of site usage such as last date accessed, login name, time and visited page. Lecturer can also investigate the trends of the website in terms of popularity by identifying the most visited page. In conclusion, the Web Usage Analyzer System provides great features to the lecturer to investigate and analyze the users' behaviors, activities and their performances.

TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENT.....	iii
ABSTRACT.....	iv
TABLE OF CONTENTS	v
LIST OF ABBREVIATIONS	ix
LIST OF FIGURES	x
LIST OF TABLES	xiii
1.0 INTRODUCTION.....	1
1.1 PROBLEM BACKGROUND	1
1.2 PROBLEM OF STATEMENT.....	2
1.3 OBJECTIVES OF THE RESEARCH	3
1.4 SCOPE OF THE RESEARCH	3
1.5 SIGNIFICANCES OF THE RESEARCH.....	3
1.5.1 Significances to the Future Researchers	4
1.5.2 Significances to the Content Developer.....	4
1.5.3 Significances to the NBPL Users	4
1.6 OUTLINED OF THE THESIS.....	5
2.0 LITERATURE REVIEW	6
2.1 INTRODUCTION.....	6
2.2 DEFINITION OF THE COMMON TERMS.....	6
2.3 WEB USAGE MINING.....	7
2.4 WEB-BASED COLLABORATIVE LEARNING	10
2.5 WEB USAGE MINING PHASES	11
2.5.1 Preprocessing.....	11
2.5.1.1 Content Preprocessing.....	12
2.5.1.2 Structure Preprocessing	13
2.5.1.3 Usage Preprocessing.....	13
2.5.2 Pattern Discovery.....	14